6. Reports on Recent Activities

Financial Derivatives and Portfolio Theory
May 3–8, 1999, Eindhoven (The Netherlands)

The EURANDOM institute at the University of Eindhoven hosted and organized this five day training event under chairman Thomas Mikosch with well-known speakers Tomas Björk (Stockholm School of Economics), Ralf Korn (University of Kaiserslautern) and Peter Spreij (University of Amsterdam). Closely 50 participants attended the lectures which consisted of three two-hour sessions on Monday to Thursday and two two-hour sessions on Friday totalling to 28 hours of introduction to finance mathematics. The spectrum of the lectures was quite broad, from a basic introduction to Finance and Brownian motion to the more sophisticated chapters on Stochastic partial differential equations and Portfolio optimization. The event was well scheduled and scripts were distributed to all the participants. During the breaks, all the lecturers were available for questions from the participants and provided profound knowledge of their respective subjects. Discussion was also encouraged among the participants, mostly Ph.D. students and graduate students, especially during the two hour lunch break. The event thus provided not only an introduction to finance mathematics and the theory of financial derivatives, but also gave a glimpse into recent developments, such as Portfolio Optimization under Transaction Costs.

Marcus Haas, Bonn

Third Scandinavian-Ukrainian Conference in Probability Theory and Mathematical Statistics
June 8–12, 1999, Kiev (Ukraine)

The Third Scandinavian-Ukrainian Conference in Probability Theory and Mathematical Statistics took place from June 8 to 12, 1999 at the National Taras Shevchenko University (NTSU), Kiev, Ukraine. It was organized by the Department of Mathematics of NTSU, in conjunction with the National Academy of Sciences of Ukraine and the Institute of Mathematics. The conference was supported by the Ministry of Ukraine for Affairs of Science and Technologies and the international foundation "Vidrodgennya".

The Scandinavian-Ukrainian Conference in Probability Theory and Mathematical Statistics is held each two years. The first conference took place in Ukraine in 1995 and was followed by the conference in Sweden in 1997. This year conference was attended by about 200 participants from 14 countries. The lectures covered special topics from various fields: Stochastic analysis; Limit theorems; Statistics; Markov processes; Infinitedimensional analysis and quantum theory; Queuing theory; Stochastic models in finance; Random fields; Probability distributions.

There were 14 invited lectures and 137 contributed talks. The invited speakers were R. Minlos (Russia), A. Gut (Sweden), I. Kovalenko (Ukraine), M. Gyllenberg, Y. Kozachenko (Ukraine), O. Zakusylo (Ukraine), S. Albeverio (Germany), M. Portenko (Ukraine), L. Streit (Germany), J. Steif (Sweden), Y. Linkov (Russia), H. Schmidli (Denmark), A. Dorogovtsev (Ukraine), Y. Kondratiev (Germany).

Alongside with the conference, the school on financial mathematics has been held from June 8 to June 11. About 15 lectures were given in the framework of the school.

There was a welcome party on the first day of the conference and a number of excursions to the ancient part of city and an excursion on the river tram along the marvelous Dnieper banks.

Alexei Kondratiev, Bonn

International Conference on Probability and Statistics and their Applications
June 9–11, 1999, Hanoi (Vietnam)

The International Conference on Probability and Statistics and their Applications took place at the National Centre for Natural Sciences and Technology (NCST), Hanoi, Vietnam. It was organized by the Hanoi Institute of Mathematics—one of 17 national institutes belonging to NCST—under the auspices of the East-Asian and Pacific Regional Committee (EAPRC) of the Bernoulli Society with Co-chairmen Louis H. Y. Chen and Tran Manh Tuan.

The conference was attended by 114 participants from 14 countries. The topics had wide spectrum ranging from theoretical probability to applied problem in statistics. There were 10 invited lectures and 34 contributed talks.

The invited speakers were J. D. Chen (China), C. S. Choi (Korea), P. Hall (Australia), F. Hsieh (Taiwan), Z. M. Ma (China), N. Obata (Japan), Y. Ogata (Japan), D. Stroock (USA), D. H. Thang (Vietnam), Y. K. Truong (Singapore). The Director General of the National Center for Natural Sciences and Technolog Prof. Dr. Dang Vu Minh and President of the Vietnam National University Hanoi and Chairman of the Council of Natural Sciences Prof. Dr. Nguyen Van Dao attended the opening ceremony and gave speeches.

The social activities included a welcome reception at the floating restaurant on the West Lake, the Conference Banquet, and a city tour. Many foreign participants have joined a trip to Halong Bay—the World Heritage (300 km in the North-East of Hanoi). These activities enhanced the informal interactions among the participants.

An EAPRC meeting was held on June 10. It noted again that the absence of participants from Indonesia, Malaysia, Thailand and the Philippines, and agreed to make efforts to organize conferences in these countries. And the committee would like to thank the organizers for the super job they had done for this conference.

Tran Manh Tuan, Hanoi
Chii-Ruey Hwang, Taipei

Tran Hung Thao, Young Troung, Nguyen Duy Tien, Tran Manh Tuan, Peter Hall in Hanoi

SPA'99—26th International Conference on Stochastic Processes and their Applications June 14–18, 1999, Beijing (The People's Republic of China)

The 26th Conference on Stochastic Processes and Their Applications took place from June 14 to 18, 1999 at the Friendship Hotel, Beijing, China. There were 94 participants, of which 57 were from foreign countries, Hong Kong and Taiwan, and 27 from mainland China.

The Special Invited SPA lecture, which was sponsored by Elsevier Science B. V., was delivered by A. N. Shiryaev. The other invited lectures, each of 45 minutes, were delivered by L. H. Y. Chen, D. M. Chung, J. G. Dai, P. A. Ferrari, M. Fukushima, T. Kurtz, Y. G. Lu, T. S. Mountford, B. Øksendal, S. G. Peng, M. P. Qian, M. Röckner and S. J. Sheu. There were 12 sessions with about 70 contributed talks of 25 minutes each. The conference covered a wide spectrum of topics ranging from theoretical to applied probability.

A meeting of the Committee for Conferences on Stochastic Processes was held during the conference. Michael Keane was elected as the new chairman of the Committee. It was confirmed at the meeting that the 27th SPA conference would be held in Cambridge, U.K. in 2001 and agreed that the 28th SPA conference be held in Melbourne, Australia in 2002.

There was much enthusiasm and interaction among the participants. The conference was a great success.

Jia-an Yan, Beijing

International Workshop on Markov Processes and Controlled Markov Chains
August 22–28, 1999, Changsha, Hunan (China)

The workshop was co-chaired by Zhenting Hou, J. A. Filar, A. Chen and Louis H. Y. Chen. It was sponsored by the Changsha Municipal Government, Xiangcai Securities Co. Ltd., the Bernoulli Society, the National Science Foundation of China and other organizations.

Guangzhao Zhou, Chinese Academy of Sciences, Vice-Chairman of the Standing Committee of the National People's Congress of China, and Chairman of the Chinese Association of Science and Technology, accorded the workshop this inscription: "Carrying out Academic Exchanges and Promoting Scientific Research".

The workshop brought together 120 scholars in the relevant disciplines from all over the world. The plenary lectures by E. Dynkin (Cornell University, USA), S. Watanabe (Kyoto University, Japan), A. Haurie (University of Geneva, Switzerland) and O. Hernandez-Lerma (CINVESTAV-IPN, Mexico) provided the participants with some of the most important recent developments in Markov processes and controlled Markov chains. The workshop has been a great success.

Zhenting Hou, Changsha, Hunan

SESS-TIES'99 (Satellite Meeting to ISI'99)
International Conference on Environmetrics and Statistics in the Earth and Space Sciences
August 23–27, 1999, Athens (Greece)

The international conference SESS-TIES'99 on "Environmetrics and Statistics in the Earth and Space Sciences" (ESESS) convened at the Athens University of Economics and Business (AUEB), August 23–27, 1999 under the joint sponsorship of The International Environmetrics Society (TIES) and the Bernoulli Society Committee on Probability and Statistics in the Physical Sciences ($C(PS)^2$). This conference was convened as a satellite conference to the 52nd Biennial Session of the International Statistical Institute (ISI) in Helsinki, and it marked the tenth anniversary of the same conference sponsored by the $C(PS)^2$ in 1989 at Leuven. It also marked the tenth anniversary of the annual series of international conferences on Quantitative Methods for the Environmental Sciences since the foundation of TIES. The scientific program committee was chaired by Abdel El-Shaarawi and the local organization was chaired by Harry Pavlopoulos.

The keynote address for the conference was delivered by Jef L. Teugels on "Wind and Statistics". The presentation helped to define wind in stochastic terms at various scales ranging from breezes and gusts to tornadoes and hurricanes. The importance of better quantification of wind was highlighted by example applications to the design of structures to spread of pollutants in the atmosphere.

Peter Guttorp delivered the John Stuart Hunter Lecture entitled "Picture the Future: Graphical Innovation in Environmental Statistics". This talk illustrated statistically informative graphical tools applied to the display of high dimensional categorized data, and of space-time processes, where the pitfalls and limitations of "static projections" were addressed.

The conference consisted of 23 Sessions where 57 talks were delivered by invited and contributing speakers who covered a number of diverse special topics. There were also 2 Poster Sessions where 22 papers were presented by graduate students of the Statistics Department of AUEB. We present here a sample of sessions intended to acquaint the reader with a few of the problems, issues and results which exist in this very broad area of scientific research. This is by no means a comprehensive report, but the complete program and abstracts may be viewed at the designated website

`http://www.stat-athens.aueb.gr/esess/`

The session entitled "Statistical Research on Ambient Particulate Matter Pollution" dealt with three principal statistical questions arising in air pollution health effects research: Assessment of the precision and accuracy of exposure data; Developments of statistical models of air pollution exposure; and Relationships between exposure data and health effects data.

A session on "Extremes" identified problems pertaining to climatic extremes in precipitation, hurricanes, and wind storms with some emphasis on modeling the associated economic damages and risks.

The session on "Diffusion and Transport" focused on concentration profiles measured as the result of turbulent diffusion and atmospheric dispersion. Laboratory data illustrated the fundamentally inherent stochastic evolution of the concentration data sets taken from wind tunnel experiments. Methods to obtain evolution equations were discussed as well as the application of extreme value theory to describe high concentration tails.

In the session entitled "Ecological Statistics" statistical methodology to analyse invivo animal-data on the toxicokinetic process of uptake, exhalation and metabolism of the petrochemical ethylene was considered. This is a natural body constituent and an important industrial chemical. Apart from the study of experimental animals, this type of research also presents a need for new methodology to extrapolate from findings in animals to human organisms in the formation of DNA-adducts. A second talk in this session was concerned with the problem of soil erosion by water. Small data set problems were noted and aerial photography was proposed as a possible remedy which would require development of suitable methods of pattern recognition and forecast formulae. A major issue in this regard is the linking of field observations with information gained from aerial photography.

The session on "Precipitation" addressed the issue of identifying the presence of long-term trends in precipitation via quantification of trend parameters in Generalised Linear Models fitted to rainfall data from the Galway Bay region in Western Ireland, along with some specimen predictions of future climate in the area derived from simulations. The rest of the session was concerned with the space-time structure of rainfields under the prism of scaling properties across the range of spatial mesoscales. Interest was partly focused on scaling properties of tail quantiles and moments of dry and wet spell lengths in time series of spatially averaged rain rate retrieved from TOGA-COARE radar snapshots, and partly on the estimation of parameters in a class of space-time causal multifractal rainfall models based on dynamic discrete multiplicative cascades.

The session on "River Networks and Flows" addressed the general problem of prediction of flows from ungauged river basins. Here the problem is to assess flows (and extremes) from information about local climate (rainfall, snowmelt) and topography (hillslope distributions, river network). The approach is based on relationships between scaling exponents and self-similarities observed in rainfall, topography, and flows. Research seeks to identify and quantify these relationships in data and to provide a theoretical framework for their interpretation.

The TIES Student Prize Award was shared between Elke Kestens (Katholieke Universiteit Leuven, Belgium) for her talk entitled "Period Analysis of Astronomical Time Series: A Non-Parametric Approach" in the session "Statistics in the Astrosciences", and Maria Schipper (University of Utrecht, The Netherlands) for her talk entitled "Towards a Sequential Analysis of Environmental Monitoring Data: Simplification of the Covariance Matrix Structure" in the session "Change-Point and Sequential Analysis", for their outstanding presentations. A complementary award was given by TIES to Dimitra Pinotsi (Athens University of Economics and Business, Greece) in recognition of the best poster paper presentation entitled "Stochastic Modelling of Rain Rate Processes through a Diffusion Framework".

Perhaps the summarizing theme of this conference is that whether from the perspective of environmental analysis and mitigation or from purely scientific curiosity, modern technology has made observations possible at a range of scales of space and time in which there is a dearth of both mathematical/physical theory and statistical methodology, yet the prospects for revolutionary new frameworks. That is, plenty "food for thought" and for future meetings bringing together theoreticians and practitioners towards improved understanding of physical and anthropogenic impacts on the evolution of the Environment.

Unanimous acknowledgement by delegates and participants regarding the successful organization and materialization of the conference, including all aspects of accommodation and social events, obliges us to express our most sincere thanks to the partial co-sponsors of the conference (Athens University of Economics and Business, General Secretariat of Research and Technology, Hellenic Ministry of Education, Hellenic Ministry of Environment, and Hellenic Ministry of Culture), and even more so to all the individuals who genuinely offered their help and worked to make this meeting successful and memorable. In particular, the photographs accompanying this report, are kindly provided by Nadia El-Shaarawi, as a glimpse to highlighted moments of the conference.

Ed Waymire, Oregon,
Abdel El-Shaarawi, Ontario,
Harry Pavlopoulos, Athens

The Student Award Winners: Dimitris Podiotis, Maria Schipper and Elke Kestens

11th European Young Statisticians Meeting
August 24-28, 1999, Marly-le-Roi (France)

The European Young Statisticians Meetings are a series of conferences patronized by the Bernoulli Society which are held every two years. They gather European researchers in probability theory or statistics who are less than 30 years old or have 2 to 8 years of research experience. The 11th European Young Statisticians Meeting was held in Marly-le-Roi, near Paris, on August 24-28, 1999. It was organized by C. Cierco-Ayrolles, O. David, S. Schbath-Grammagnat and G. Tordjman-Mohaddab (INRA). It gathered 39 participants coming from 21 European countries. The meeting took place at the Institute for Youth and Community Education, which offers in the same location lecture rooms, accommodation and dining rooms. Each participant gave a talk and wrote an abstract. The subjects of the talks were varied and ranged from probability theory to applied statistics. The social program included an excursion to the Chteau of Versailles and a conference dinner in Versailles. Discussions between participants were encouraged during the meeting. The next meeting will be held in 2001 either in Hungary or in Slovakia.

Olivier David, Versailles